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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,358	12/19/2005	Masaru Shinohara	59383US007	5956
32692	7590	02/03/2009	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			FEELY, MICHAEL J	
PO BOX 33427				
ST. PAUL, MN 55133-3427			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			02/03/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com  
LegalDocketing@mmm.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/561,358	SHINOHARA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael J. Feely	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 10 November 2008.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,2,4 and 5 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,4 and 5 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 19 December 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Pending Claims***

Claims 1, 2, 4, and 5 are pending.

### ***Claim Interpretation***

1. In claims 1, 2, 4, and 5, the term (meth)acrylic acid in the instant claims includes both acrylic acid and methacrylic acid. Furthermore, the term alkyl (meth)acrylate includes both alkyl acrylate and alkyl methacrylate.
2. In claims 1, 2, 4, and 5, the recitation “*masking tape*” has been given little patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In the instant case, the preamble merely recites the intended use of the tape, wherein the prior art can meet this future limitation by merely being capable of such intended use.

### ***Response to Amendment***

3. The rejection of claims 1, 2, 4, and 5 under 35 U.S.C. 102(a) as being anticipated by Takeda et al. (WO 03/064552 A1) has been overcome by Applicant's perfection of their foreign priority claim.

4. The rejection of claims 1, 2, 4, and 5 under 35 U.S.C. 102(b) as being anticipated or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schuman et al. (US 2001/0055679) has been overcome by amendment.

5. The rejection of claims 1, 2, 4, and 5 under 35 U.S.C. 102(b) as being anticipated or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schuman et al. (US 2002/0114948) has been overcome by amendment.

6. The rejection of claims 1, 2, 4, and 5 under 35 U.S.C. 102(b) as being anticipated or, in the alternative, under 35 U.S.C. 103(a) as obvious over Liu et al. (US Pat. No. 4,762,747) has been overcome by amendment/withdrawn. Note: after further consideration, it is unclear if the adhesive of Liu et al. is a pressure sensitive adhesive. The hot-press bonding method in the Examples suggests otherwise.

7. The rejection of claims 1, 2, 4, and 5 under 35 U.S.C. 103(a) as being unpatentable over Yamanaka et al. (US 2003/0124346 A1) in view of Schuman et al. (US 2001/0055679) has been overcome by amendment.

### ***Response to Arguments***

8. Applicant's arguments with respect to Takeda et al. (*see pages 3-4 of the response filed November 10, 2008*) have been fully considered but they are not fully persuasive.

The certified translation of the JP 2003-206343 disqualifies the reference under 102(a). However, the reference still qualifies under 102(e) with a 102(e) date of November 14, 2002. Furthermore, a statement of common ownership can only disqualify a 102(e) reference when it is applied under 35 U.S.C. 103(a) – *see MPEP 706.02(l)(3)*.

9. Applicant's arguments with respect the remaining previous prior art rejections (*see pages 4-7 of the response filed November 10, 2008*) have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Takeda et al. (WO 03/064552 A1).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 2, and 4, Takeda et al. disclose: (1) a heat resistant masking tape (Abstract; Example 1: see pages 13-15, particularly Table 1; claims 6-8), comprising: (1) a heat resistant backing film layer selected from the group consisting of polyethylene naphthalate, polyphenylene sulfide, and polyimide (Abstract; claims 6-8; Example 1: see page 14, line 18 through page 15, line 16), further wherein a surface of the heat resistant backing film layer is surface treated (Example 1: see page 14, line 18 through page 15, line 16); and (2) a non-aqueous pressure-sensitive adhesive layer disposed on the treated surface of the heat resistant backing film layer (Abstract; Example 1: see pages 13-15, particularly Table 1), wherein the pressure-sensitive adhesive layer comprises a polymer resulting from solution polymerizing and cross-linking in an organic solvent (Example 1: see pages 13-15, particularly Table 1) a monomer mixture comprising:

- an alkyl (meth)acrylate with an alkyl group having 4 to 15 carbon atoms (Example 1: see pages 13-15, particularly Table 1);
- glycidyl (meth)acrylate (Example 1: see pages 13-15, particularly Table 1); and
- (meth)acrylic acid (*acrylic acid or methacrylic acid*) (Example 1: see pages 13-15, particularly Table 1);

the glycidyl (meth)acrylate being present in an amount of 2 to 13% by weight of the total weight of monomers (Example 1: see pages 13-15, particularly Table 1) and the (meth)acrylic acid (*acrylic acid or methacrylic acid*) being present in an amount of 1 to 7% by weight of the total weight of monomers (Example 1: see pages 13-15, particularly Table 1); **(2)** wherein said pressure-sensitive adhesive layer has a thickness of 0.5 to 100  $\mu\text{m}$  (Example 1: see pages 13-15, particularly page 15, lines 6-11; claims 6-8); and **(4)** wherein said heat resistant backing layer has a thickness of 1 to 250  $\mu\text{m}$  (Example 1: see pages 13-15, particularly page 15, lines 1-5; claims 6-8).

Regarding claim 5, the prior art is as set forth above and incorporated herein to anticipate the instant invention.

#### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka et al. (US 2003/0124346) in view of Zhou et al. (US 2002/0132111) has been overcome by amendment.

Regarding claims 1, 2, and 4, Yamanaka et al. disclose: **(1)** a heat resistant masking tape (Abstract; paragraph 0001), comprising: (1) a heat resistant backing film layer (paragraph 0072); and **(2)** a pressure-sensitive adhesive layer disposed on a surface of the heat resistant backing

film layer (paragraphs 0008-0015), wherein the pressure-sensitive adhesive layer comprises a polymer resulting from polymerizing and cross-linking a monomer mixture comprising:

- an alkyl (meth)acrylate with an alkyl group having 4 to 15 carbon atoms (paragraphs 0020-0021);
- *an optional copolymerizable monomer* (paragraph 0023); and
- (meth)acrylic acid (paragraphs 0022);

the *optional copolymerizable monomer* being present in an amount of 2 to 13% by weight of the total weight of monomers (paragraph 0023) and the (meth)acrylic acid being present in an amount of 1 to 7% by weight of the total weight of monomers (paragraph 0022); (2) wherein said pressure-sensitive adhesive layer has a thickness of 0.5 to 100  $\mu\text{m}$  (paragraph 0072); and (4) wherein said heat resistant backing layer has a thickness of 1 to 250  $\mu\text{m}$  (paragraph 0072).

Yamanaka et al. disclose the use of an *optional copolymerizable monomer*, wherein the list of candidates includes glycidyl (meth)acrylate (*see paragraph 0023*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include glycidyl (meth)acrylate in the composition of Yamanaka et al. because they disclose the use of an optional copolymerizable monomer. The list of candidate monomers includes glycidyl (meth)acrylate.

Yamanaka et al. fail to explicitly disclose a *non-aqueous* adhesive formed by *solution polymerizing and cross-linking in an organic solvent*. However, it should be noted that this represents a product-by-process limitation. It has been found that, “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of

production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process,” – *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (see MPEP 2113). In the instant case, the final (dried) product would have been free of non-reactive carrier fluid (*water or solvent*), regardless of the carrier type.

Therefore, it appears that the tape of Yamanaka et al. obviously satisfies the instant invention because all of the reactive material limitations have been satisfied. The final (dried) product, as claimed, would have been free of non-reactive carrier fluid (*water or solvent*), regardless of the carrier type.

Yamanaka et al. disclose the use of *polyester films*; however, they fail to explicitly disclose: (1) (a) wherein said heat resistant backing film layer is selected from the group consisting of polyethylene naphthalate, polyphenylene sulfide, and polyimide; (b) further wherein a surface of the heat resistant backing film layer is surface treated; and (c) wherein the pressure-sensitive adhesive is disposed on the treated surface.

Zhou et al. also disclose pressure-sensitive adhesive articles (*see Abstract*) featuring heat resistant backing films (*see paragraph 0021*). Zhou et al. demonstrate that polyethylene naphthalate films are representative of *polyester films* for this type of pressure-sensitive adhesive article (*see paragraph 0021*). Furthermore, they disclose that a *primer treatment* is preferably employed when using these polyethylene naphthalate films (*see paragraph 0021*). In light of this, it has been found that the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination – *see MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a (*primed*) polyethylene naphthalate backing film, as taught by Zhou et al., in the pressure-sensitive adhesive article of Yamanaka et al. because the teachings of Zhou et al. demonstrate that polyethylene naphthalate films are representative of *polyester films* for this type of pressure-sensitive adhesive article. Furthermore, they disclose that a *primer treatment* is preferably employed when using these polyethylene naphthalate films.

Regarding claim 5, the prior art is as set forth above and incorporated herein to obviously satisfy the instant invention.

14. Claims 1, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehmann et al. (US Pat. No. 4,038,454) in view of Zhou et al. (US 2002/0132111).

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehmann et al. (US Pat. No. 4,038,454) in view of Zhou et al. (US 2002/0132111) and Yamanaka et al. (US 2003/0124346).

Regarding claims 1 and 4, Lehman et al. disclose: (1) a heat resistant tape (Abstract; column 5, lines 36-46), comprising: (1) a heat resistant backing film layer (Example 4: see column 8, lines 1-38), further wherein a surface of the heat resistant backing film layer is surface treated (Example 4: see column 8, lines 1-38); and (2) a non-aqueous pressure-sensitive adhesive layer disposed on the treated surface of the heat resistant backing film layer (Example 4: see column 8, lines 1-38), wherein the pressure-sensitive adhesive layer comprises a polymer resulting from solution polymerizing and cross-linking in an organic solvent (Example 4: see column 8, lines 1-38) a monomer mixture comprising:

- an alkyl (meth)acrylate with an alkyl group having 4 to 15 carbon atoms  
(Example 4: see column 8, lines 1-38);
- glycidyl (meth)acrylate (Example 4: see column 8, lines 1-38); and
- (meth)acrylic acid (*acrylic acid or methacrylic acid*) (Example 4: see column 8, lines 1-38);

the glycidyl (meth)acrylate being present in an amount of 2 to 13% by weight of the total weight of monomers (Example 4: see column 8, lines 1-38) and the (meth)acrylic acid (*acrylic acid or methacrylic acid*) being present in an amount of 1 to 7% by weight of the total weight of monomers (Example 4: see column 8, lines 1-38); and (4) wherein said heat resistant backing layer has a thickness of 1 to 250  $\mu\text{m}$  (Example 4: see column 8, lines 1-38; column 6, lines 1-11).

Lehman et al. disclose the use of a polyethylene terephthalate backing film; however, they fail to explicitly disclose: (1) a heat resistant backing film layer selected from the group consisting of polyethylene naphthalate, polyphenylene sulfide, and polyimide.

The teachings of Zhou et al. are as set forth above and incorporated herein. They disclose that polyethylene terephthalate and polyethylene naphthalate are equivalent and interchangeable *polyester* backing films used in pressure-sensitive adhesive articles (*see paragraph 0021*). This includes scenarios wherein a *primer treatment* is applied to the backing film (*see paragraph 0021*). In light of this, it has been found that substituting equivalents known for the same purpose is *prima facie* obvious - *see MPEP 2144.06*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the polyethylene terephthalate backing film of Lehman et al. with a polyethylene naphthalate backing film because the teachings of Zhou et al. establish that these

materials are equivalent and interchangeable *polyester* backing films used in pressure-sensitive adhesive articles. This includes scenarios wherein a *primer treatment* is applied to the backing film.

Regarding claim 5, the prior art is as set forth above and incorporated herein to obviously satisfy the instant invention.

Regarding claim 2, Example 4 of Lehman et al. disclose a pressure-sensitive adhesive layer thickness of 200  $\mu\text{m}$ . Hence, they fail to explicitly disclose: (2) wherein said pressure-sensitive adhesive layer has a thickness of 0.5 to 100  $\mu\text{m}$ .

Although the thickness set forth in Example 4 of Lehman et al. falls outside of this range, there is nothing in this reference that teaches away from using other adhesive thicknesses. Turning to Zhou et al. (*see paragraph 0063*) and Yamanaka et al. (*see paragraph 0072*), these references establish that the instantly claimed adhesive thickness is recognized in the art as a suitable thickness in pressure-sensitive adhesive articles.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the instantly claimed adhesive thickness, as taught by Zhou et al. and Yamanaka et al., in the pressure-sensitive adhesive article of Lehman et al. because the teachings of Zhou et al. Yamanaka et al. demonstrate that the instantly claimed adhesive thickness is recognized in the art as a suitable thickness in pressure-sensitive adhesive articles.

***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/  
Primary Examiner, Art Unit 1796

January 29, 2009